

**Title:** A Prospective Analysis of Pharmacists Integration in the Patient-Centered Medical Home: Preparing for Value-Based Care

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**Key Words:** Pharmacist, pharmacy services, patient-centered medical home, value-based care

This is an unpublished manuscript of research completed in several patient centered medical homes that provide pharmacy services; presented at the 2016 American Pharmacists Association annual meeting in Baltimore, MD.

## ABSTRACT

**Objective:** The purpose of this project was to describe pharmacy services in a patient-centered medical home to demonstrate pharmacists' involvement in the evolving delivery of primary care.

**Design:** This was a prospective, qualitative study. **Setting and Participants:** This project analyzed the work of eight pharmacists employed at a National Committee for Quality

Assurance tier III patient-centered medical home associated with a large, academic medical

center. **Outcome Measures:** The primary outcome was to identify and quantify the types of services completed by pharmacists in a patient-centered medical home. Secondary outcomes

included determining the percentage of pharmacist recommendations accepted by providers and patients, the percentage of pharmacist interventions submitted for third-party reimbursement, and

the average time spent per encounter. **Results:** Eight pharmacists (representing 4.0 full-time equivalents) facilitated 581 encounters over 20 days. Mean time spent per encounter was 20

minutes ( $\pm 19$ ). The most common types of encounters were interdisciplinary visits (31.8%)

and phone/secure portal communication (30.0%). Of 918 pharmacist recommendations made to providers, 830 (90.4%) were accepted and implemented. Of 412 pharmacist recommendations

made to patients, 393 (95.4%) were verbally accepted. Thirty-nine percent of encounters were

eligible for direct payor billing. **Conclusion:** Our data show that pharmacists working in a

patient-centered medical home are effectively integrated within the evolving delivery of primary

care. Consistent inclusion of pharmacy services should be readily supported in future models of health care reform.

## **KEY POINTS**

### **Background:**

- Health system incentives and reimbursement have started to align with the delivery of team-based care
- Pharmacists inclusion in primary care delivery within value-based care models is less well-defined
- As the paradigm shifts from traditional fee-for-service to value-based care models, it is logical that pharmacists be consistently incorporated in these new payment models

### **Findings:**

- Pharmacists involved in the delivery of primary care provide services that are consistently utilized to improve medication management
- Pharmacists recommendations for traditional and evolving health care initiatives were accepted at high rates
- Within the current payment model, pharmacists have limited opportunities for billing and sustainable reimbursement
- Consistent inclusion of pharmacists to improve the quality of patient care and decrease health care costs should be supported in all future models of health care reform

## **INTRODUCTION**

The percentage of adults with multiple chronic conditions<sup>1</sup> who are prescribed two or more medications<sup>2</sup> has steadily increased over time. The aging population, high medical costs

associated with clinically complex patients, and the integration of information technology into health systems has led to an unsustainable rise in health care expenditures.<sup>3,4</sup> Furthermore, increased health care spending in the United States (U.S.) has not resulted in better patient outcomes with traditional health care models when compared to other nations.<sup>3</sup> The transition from primary care services being rendered by an individual provider to comprehensive care provided by a team is foundational to high-performing primary care.<sup>5</sup> Interdisciplinary teams allow individual practitioners with complementary skillsets and diverse clinical backgrounds to assist in the holistic care of patients.<sup>6-8</sup> More recently, health system incentives and reimbursement have started to align with the delivery of team-based care.<sup>9</sup>

The transition from traditional fee-for-service models to newer payment programs centered on value-based care is currently in progress. The Centers for Medicare and Medicaid Services (CMS) declared that 50% of fee-for-service payments and 90% of traditional payments will be linked to value by 2018.<sup>9,10</sup> Commercial payers have followed suit in instituting performance-based reimbursement.<sup>4</sup> The Medicare Access and CHIP Reauthorization Act (MACRA) of 2015 proposed two quality payment program pathways for value-based care, including the Merit-Based Incentive Payment System (MIPS) and alternative payment models (APMs).<sup>11</sup> These value-based payments are not linked to a specific provider; instead, they incentivize health systems, clinical practices, and interdisciplinary teams to work toward better health and patient care at lower costs.<sup>12</sup> As a result, many health systems are forming accountable care organizations (ACOs), establishing patient-centered medical homes (PCMH), and utilizing bundle payments and demonstration projects to capture market share.<sup>4,9</sup> While the *2011 Report to the U.S. Surgeon General* noted that pharmacists are integrated into some primary care

practices as health care providers, the role of pharmacists within value-based care is less well-defined.<sup>11, 13-14</sup>

The Patient Protection and Affordable Care Act (PPACA) of 2010<sup>15</sup> expanded health care coverage, increasing the demand for primary care services. This demand cannot be fulfilled due to shortages within the current provider workforce.<sup>7, 16</sup> Pharmacists are well-trained and uniquely positioned to help bridge the demand-capacity gap in primary care, yet their services are often underused and unrecognized.<sup>7, 14</sup> Pharmacists have consistently demonstrated their ability to improve the quality of patient care, serve as a valuable resource for other health care providers and personnel, and empower patients to achieve their individualized goals.<sup>17</sup> Direct patient care delivered by pharmacists has led to improved clinical outcomes and reduced costs for several medical conditions, including diabetes,<sup>18-19</sup> hypertension,<sup>20-21</sup> dyslipidemia<sup>22-23</sup> and also increased patient satisfaction.<sup>24</sup> Additionally, pharmacist-led anticoagulation clinics have demonstrated tremendous cost savings by reducing hospitalizations and emergency department visits when compared to usual care.<sup>25-26</sup>

In the traditional fee-for-service model, pharmacists have limited opportunities for billing and sustainable reimbursement, as they are not currently recognized as health care providers by CMS; this has hindered the widespread implementation of pharmacists into physician practices.<sup>27</sup> However, recent changes to care delivery payment, such as capitation and shared savings contracts, in addition to the emphasis by PCMH credentialing bodies on medication management for populations<sup>28</sup> has led to interest in incorporating pharmacists into the primary care setting. Currently, pharmacists working within an interdisciplinary team model have the ability to submit

current procedural terminology (CPT) codes for medication therapy management (MTM), contribute to chronic care management (CCM) or transitional care management (TCM), bill incident-to a provider, and bill annual wellness visits as means to generate revenue.<sup>28</sup> Despite the emergence of these billing techniques and pharmacist-specific CPT codes, reimbursement and relative value units (RVUs) continue to be more difficult to track for pharmacists when compared to other non-physician providers (e.g., physicians assistant, advanced nurse practitioner), thereby limiting pharmacist utilization in PCMH settings. As the paradigm shifts from fee-for-service to value-based care, it is logical that pharmacists be consistently incorporated in these new payment models designed to improve patient outcomes and decrease overall costs.

The successful implementation of pharmacists in a PCMH and other primary care settings has been described elsewhere,<sup>29-31</sup> but there is limited literature describing how pharmacists should be incorporated into value-based models. The purpose of this project was to provide an analysis of pharmacy services in a PCMH with the goal of demonstrating pharmacists' involvement in the delivery of primary care. The primary objective was to identify and quantify the types of services and interventions completed by pharmacists in a PCMH. Secondary objectives included characterizing the patients impacted by pharmacists in this setting, and determining the percentage of pharmacist recommendations accepted by primary care providers, the percentage of pharmacist interventions submitted for third-party reimbursement, and the average time spent per encounter.

## **METHODS**

This study was conducted at five National Committee for Quality Assurance (NCQA) tier 3 PCMH sites associated with a large, academic medical center. Collectively, the interdisciplinary team includes 44 attending physicians, 108 medical residents, five pharmacists, three pharmacy residents, three nurse practitioners, 15 registered nurses, two social workers, and 47 medical assistants. Over 59,000 patients receive primary care services within the five PCMH locations annually. The health care payor mix includes 36.2% Medicare, 34.4% third-party insurance, 26.6% Medicaid, and 2.3% uninsured. The clinics utilize an electronic health record (EHR) that is integrated throughout the health system and contains clinical progress notes, medical condition lists, prescribed medications, laboratory values and imaging used to provide individualized patient care. Pharmacists within this PCMH provide direct patient care, involving comprehensive medication management,<sup>32</sup> and also lead an array of team-based services, such as interdisciplinary disease management clinics, population health and transitional care management. Additionally, pharmacists serve as experiential educators to student pharmacists, medical students, and pharmacy, medical, and dental residents throughout the academic year.

This was a prospective, descriptive study that included five pharmacists and three pharmacy residents employed within five PCMH locations. Pharmacists used Qualtrics™ Survey Software to record their daily interventions electronically. After each intervention made, pharmacists characterized the type of encounter; disease states and health-related topics addressed; number and type of pharmacist recommendations made to and accepted by providers and patients; billing techniques used (if applicable), and length of encounter (excluding pre- and post-encounter activities). Patient demographics, including age, sex, race, insurance coverage, and number of home medications prior to the encounter were also recorded. Pharmacists submitted their

interventions immediately after each encounter that occurred over the course of one calendar month (20 business days).

Encounters were characterized as pharmacy visits (one-on-one office visits with a pharmacist); interdisciplinary visits (any office visit utilizing both a pharmacist and a physician and/or nurse practitioner); phone or secure portal communications; drug information requests (written and verbal inquiries from patients and/or healthcare personnel), or other. Encounters were further classified as being scheduled, where pharmacy services were planned for a specific date and time, or unscheduled, where the delivery of pharmacy services occurred spontaneously throughout the course of a typical clinic day. Pharmacists documented the specific disease states and/or health-related topics that required intervention during each encounter and also recorded if specific recommendations were accepted by providers and/or patients. An accepted recommendation included any verbal or written agreement by the provider or patient to the proposed intervention prior to data submission. An unaccepted recommendation included any verbal or written declination of the proposed intervention by the provider or patient prior to data submission. Responses to recommendations that were not communicated to the pharmacist prior to data submission were classified as unknown.

Billing techniques were categorized using CPT codes including incident-to (99211), provider billing (99213, 99214, 99215), transitional care management (99495, 99496) and insurance contracted comprehensive medication review (99605) codes. Encounters that were not billed for reimbursement were classified as no charge. This study was approved by the Institutional



Review Board at the Ohio State University (OSU). Descriptive statistics were used for data analysis.

## **RESULTS**

Five pharmacists and three pharmacy residents (representing 4.0 full-time equivalents) facilitated 581 encounters over 20 clinic days between January 4, 2016 and February 1, 2016. Mean time spent per encounter was 20 minutes ( $\pm 19$ ). Patient demographics were available for 543 encounters. Baseline characteristics of the patients are summarized in Table 1.

The most common types of encounters were interdisciplinary visits (31.8%) and phone/secure portal communication (30.0%) (Figure 1). One hundred sixty-eight (28.9%) encounters included pharmacy services that were scheduled and 413 (71.1%) encounters involved pharmacist interventions that occurred outside of pharmacist-scheduled office visits. Approximately 45% of encounters involved face-to-face (in the office) patient interactions. Collectively, pharmacists intervened on 616 disease states (Figure 2) and 262 health- and medication-related problems (Figure 3), most commonly addressing diabetes mellitus (24.8%), anticoagulation management (12.0%), or providing comprehensive medication reviews (8.1%). Of 918 pharmacist recommendations made to providers, 830 (90.4%) were accepted and implemented at the time of the encounter (Table 2). Of 412 pharmacist recommendations made to patients, 393 (95.4%) were verbally accepted (Table 3). Two hundred twenty nine (39.4%) encounters were eligible for direct billing to a payor (Table 4).

## **DISCUSSION**

### ***Traditional Clinical Services***

Our findings show the successful implementation of traditional pharmacy services, including diabetes and anticoagulation management, which have been evaluated outside of the PCMH model and shown to improve quality of care and reduce costs.<sup>14</sup> Approximately 25% of our interventions involved diabetes management and education. Studies have consistently demonstrated that pharmacist-driven diabetes programs improve clinical endpoints and significantly reduce direct medical costs.<sup>18-19, 33</sup> Project IMPACT: Diabetes revealed that pharmaceutical care services not only led to clinically significant reductions in hemoglobin A1c (-0.8%), but positively influenced lipid parameters and health maintenance outcomes (including increases in the number of annual eye and foot examinations, influenza vaccinations, and smoking cessation).<sup>18</sup> In the Asheville Project, the number of patients achieving optimal hemoglobin A1c (less than 7.0%) increased by 24.3% at the first follow-up, with additional increases of 27.2% and 18.2% noted at the second and third follow-ups, respectively. As a result of pharmacist interventions, payors realized decreases in total direct costs and achieved a \$4.00:\$1.00 return-on-investment (ROI) at study conclusion.<sup>19</sup> These data combined with that of the current project support why pharmacists are at the forefront of diabetes care within this PCMH.

One-eighth of our interventions involved anticoagulation management. Chiquette et al demonstrated that a pharmacist-run anticoagulation clinic led to more international normalized ratios (INRs) within therapeutic range, reduced bleeding and thromboembolic events, and saved \$162,058 per 100 patients annually in hospitalizations and emergency department (ED) visits.<sup>25</sup> Similarly, a more recent study comparing pharmacist-managed anticoagulation services to nurse-

managed and usual care models found that pharmacist interventions yielded the lowest rates of hospital and ED visits, avoiding \$141,277 and \$10,183 in hospital stay and ED costs, respectively, during a one-year period.<sup>34</sup> Furthermore, clinical pharmacists within a multispecialty group practice prevented 150 inpatient hospital admissions and saved \$450,000 annually by initiating an outpatient deep vein thrombosis protocol.<sup>26</sup> Therefore, the pharmacist-provided anticoagulation management services are corroborated by a strong, evidenced-based platform leading to incorporation within the PCMH model.

### ***Evolving Clinical Services***

Nearly one-fourth of our comprehensive medication reviews (CMRs) were billed using MTM CPT codes. In 2006, pharmacists began to bill for the delivery of MTM services for Medicare beneficiaries using three pharmacist-specific CPT codes (99605, 99606, 99607). Medicaid and select third-party payors have also recognized these codes, which has expanded pharmacist compensation in community and ambulatory settings. CMS states that MTM services may be delivered by a pharmacist or other qualified provider.<sup>35</sup> Our intervention data demonstrates that pharmacists are utilized to perform CMRs, identify medication-related problems, determine cost-effective alternatives, solve medication access issues and create medication therapy plans. After offering face-to-face MTM services to 900,000 members, an Ohio-based Medicaid program demonstrated a \$1.35:\$1.00 ROI in drug cost savings alone and a \$4.00:\$1.00 ROI in total savings, including avoided hospitalizations, ED visits, and other healthcare costs.<sup>36</sup>

Unfortunately, not all payors recognize these CPT codes, limiting availability of this service to patients receiving care in a PCMH. The inappropriate use of medication in the United States costs over \$200 billion per year.<sup>37</sup> Patients in our analysis were prescribed an average of 14

medications, reflecting the complexity of patients in this setting and the higher likelihood of medication discrepancies. Of note, 107 of 917 recommendations were to discontinue an unnecessary medication; 97% of these recommendations were accepted by the patients' primary care providers, decreasing pill burden and overall medication costs.

In addition to diabetes, anticoagulation, and CMRs, pharmacists were consulted to assist with a wide variety of disease states and health-related initiatives, signifying the broad integration and supportive roles of pharmacists within a primary care environment. While a large proportion of the encounters involved face-to-face interactions, many interactions also occurred through phone/EHR communications, which is consistent with the emerging use of health information technology.<sup>4</sup> Pharmacists used telecommunications and e-health to assess current clinical status, reconcile medication lists, identify medication-related problems, and make clinical interventions. Telemedicine has been widely adopted by integrated health-systems, including the Veterans Health Administration and Kaiser Permanente, and is highly promoted in transforming the delivery of care; this modality of communication increases access to care, adds to convenience for patients and caregivers, and is central to concepts in newer payment models.<sup>38</sup> Pharmacists in the current project facilitated TCM via phone, communicating with patients and/or caregivers within two business days of hospital discharge for medical reconciliation. Recently, a pivotal study showed that payor participants in an insurer-initiated, pharmacist-led transitions of care program for high-risk patients experienced a 50% relative risk reduction of 30-day readmission and an absolute risk reduction of 11.1%.<sup>39</sup> Furthermore, the program experienced a \$2.00:\$1.00 ROI, demonstrating that utilization of pharmacists for TCM improves the quality of hospital-to-

home transitions through identification of medication discrepancies<sup>40</sup>, but also positively impacts reimbursement for post-discharge office visits<sup>28</sup> and reduces 30-day readmissions.<sup>39</sup>

Although chronic care management (CCM) reflected less than 1% of billing techniques used, the identification of CCM patients in the EHR was not retrievable data at the time of this study. It is possible that pharmacist-completed phone and EHR communications may have contributed to use of CCM billing by the PCMH. Despite this, CCM is another viable opportunity for pharmacists to maximize reimbursement through collaboration with other health care personnel to optimize therapeutic outcomes, while tracking time spent on clinical activities which is supported by recently implemented billing processes. Additionally, our results demonstrate the development and incorporation of newer services related to transforming health care delivery. Finally, not captured within our data is pharmacist-driven population health management that was ongoing during this observation, though the impact of these initiatives has been previously reported.<sup>41-43</sup> Advanced population health management initiatives are being further explored by pharmacists, providers, and payors as they have contributed to the success of tightly integrated pharmacy models in health systems<sup>4</sup> and may be linked to improved patient outcomes or value-based support.

### ***Clinical Implications***

Mean time spent facilitating each encounter was 20 minutes, excluding pre- and post- encounter activities. The CAPTION study showed pharmacists spent 4.99 hours/patient in pre-visit, post-visit, and intra-service work managing hypertension for 390 patients over 2811 encounters within nine months, yielding a 43% improvement in blood pressure goals achieved from

baseline. This study provided insight as to how policymakers and health administrators can understand and measure pharmacists' workload as alternative payment models are being designed and implemented.<sup>21</sup>

One-third of encounters were directly facilitated by an interdisciplinary team, with the vast majority of interventions involving shared-decision making between the pharmacist, provider, and/or patient prior to acceptance. Seventy-one percent of pharmacists' encounters occurred unpremeditated throughout the routine course of patient care activities, indicating that pharmacists were easily accessible and readily available to render services in this setting. The acceptance rate of pharmacist recommendations to providers was high, which is consistent with previous literature.<sup>14, 21, 29</sup> Pharmacists' recommendations to patients were verbally accepted at similarly high rates, suggesting the need for pharmacists' collaboration in their care. These results illustrate how pharmacists working in teams can be successfully utilized in the delivery of patient care. Additionally, these results serve as an example of the integrated services of pharmacists in an established PCMH model of care. The changing payment structure for clinics necessitates that pharmacists position themselves to be incorporated into multiple aspects of patient care to collaborate on team-based initiatives, patient care access, and improve patient outcomes.<sup>6, 8</sup>

## **LIMITATIONS**

Limitations of this study include the potential under-reporting of interventions by pharmacists; to minimize this, pharmacists were asked to complete data submission immediately after each encounter. A training session was held for participating pharmacists and the data collection form

was piloted prior to implementation to reduce inter-participant variability. Limitations in quantifying the pharmacists' activities were related to development of the data collection instrument. The focus of this tool was on capturing patient encounter data and subsequent interventions, thereby omitting other valuable supportive activities completed by pharmacists in this PCMH (e.g. population management). Tracking of chronic care management billing was also not captured, as this was a newly developed interdisciplinary service for our clinic at the time of data collection. Finally, in retrospect our data collection tool did not capture time spent working behind the scenes to improve the quality of medication use, including activities such as daily patient chart reviews to assess for medication therapy outcomes, overlooked adverse effects, and potentially significant drug interactions. These activities have been identified as key vital pharmacists' tasks helping providers provide interdisciplinary quality care.<sup>38</sup>

### ***Future Directions***

This study characterizes the daily activities of pharmacists in a PCMH; however two-thirds of encounters did not result in direct billing or reimbursement. With health care payment reform and recognized provider status of pharmacists, opportunities to bill would increase, allowing practices to justify the addition of a pharmacist to the practice. As the delivery of health care is transforming, the shift toward value-based payment may help to remove the cost barrier to hiring pharmacists that cannot bill directly under the current fee-for-service model. Pharmacists' medication expertise provides a very highly trained level of team care support for complex patients that cannot be achieved by other clinical staff; yet, pharmacists also participate in multiple indirect patient care activities that are fundamental to a successful PCMH. Future

descriptions of pharmacists' involvement in a PCMH should include time dedicated to these activities to establish adequate staffing in team-based models.

## **CONCLUSION**

In summary, pharmacists within this PCMH were easily accessible and readily available to participate in a wide variety of traditional and evolving clinical services. Pharmacists' recommendations were accepted at high rates by providers and patients, demonstrating that pharmacists working in a PCMH model can effectively lead and support the value-based model of care. Pharmacist's recognition as essential providers advancing change in these newer models of care are vital to successful implementation in value based systems. The consistent inclusion of pharmacists to improve the quality of patient care, enhance medication safety, and decrease health care costs should be supported in all future models of health care reform.



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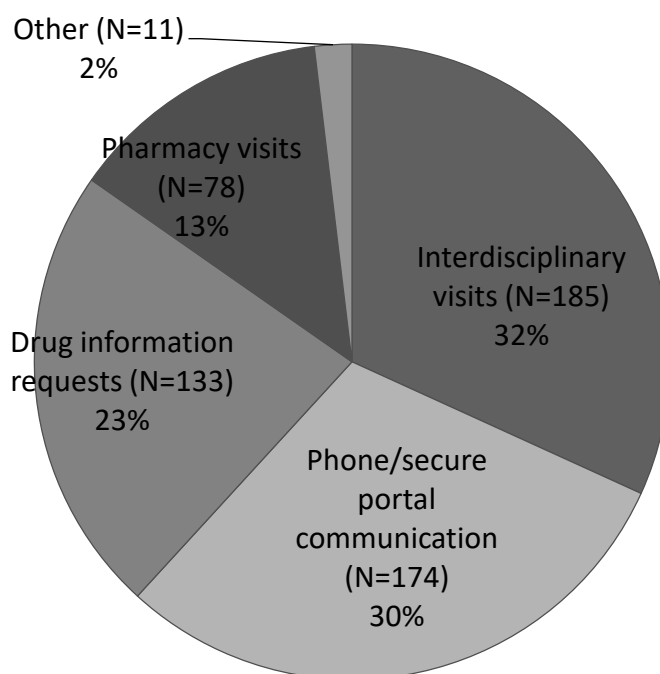
**Comprehensive Table/Figure List:**

1. Table 1: Baseline Characteristics
2. Figure 1: Encounter Type
3. Figure 2: Interventions by Disease State
4. Figure 3: Interventions by Health-Related Issue
5. Table 2: Recommendations Made to Physicians
6. Table 3: Recommendations Made to Patients
7. Table 4: Billing Techniques Used for Patient Encounters

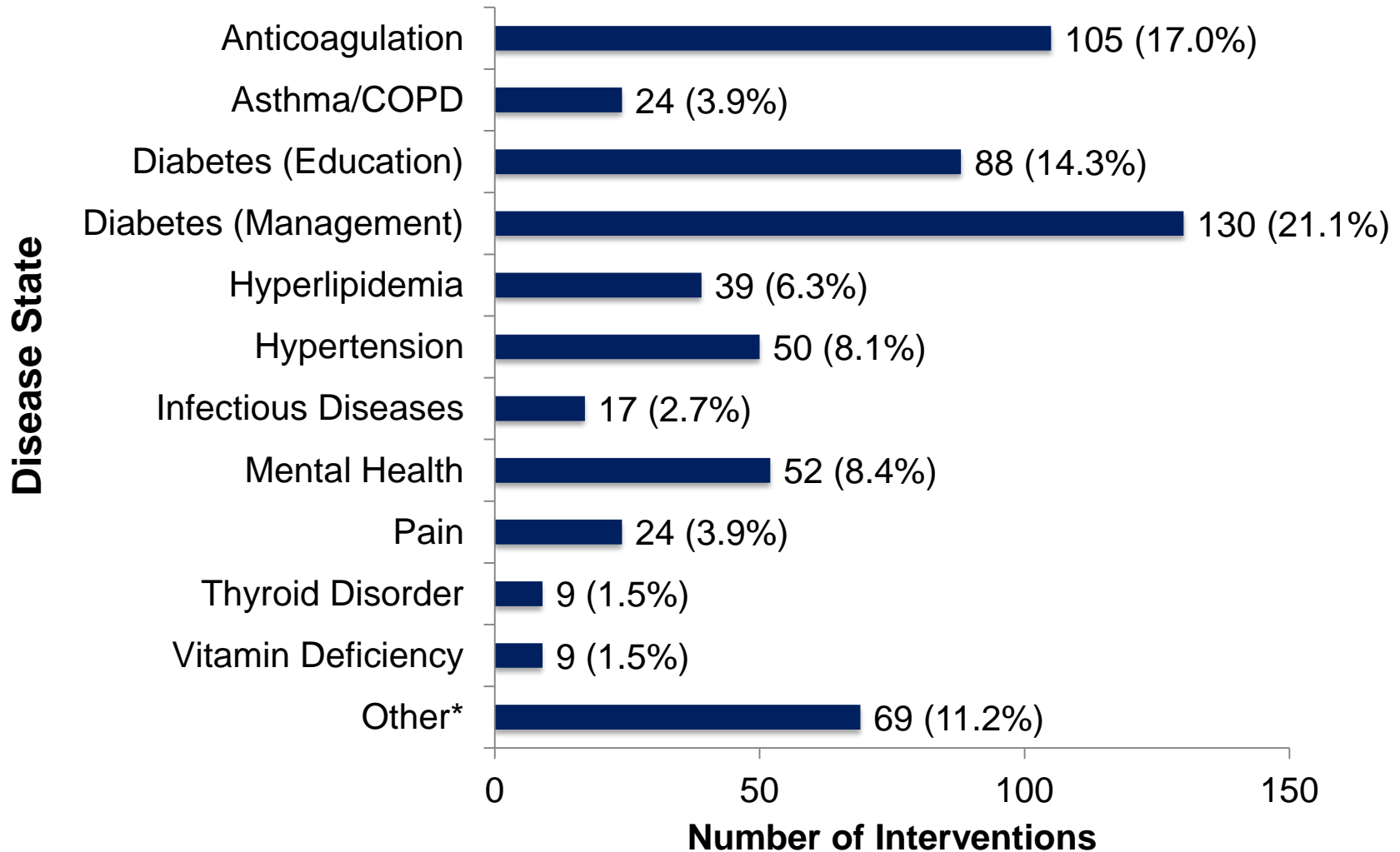


Encounter Type	Percentage
Interdisciplinary visits (N=185)	31.8
Phone/secure portal communication (N=174)	30.0
Drug information requests (N=133)	22.9
Pharmacy visits (N=78)	13.4
Other (N=11)	1.9

**Figure 1. Encounter Type**

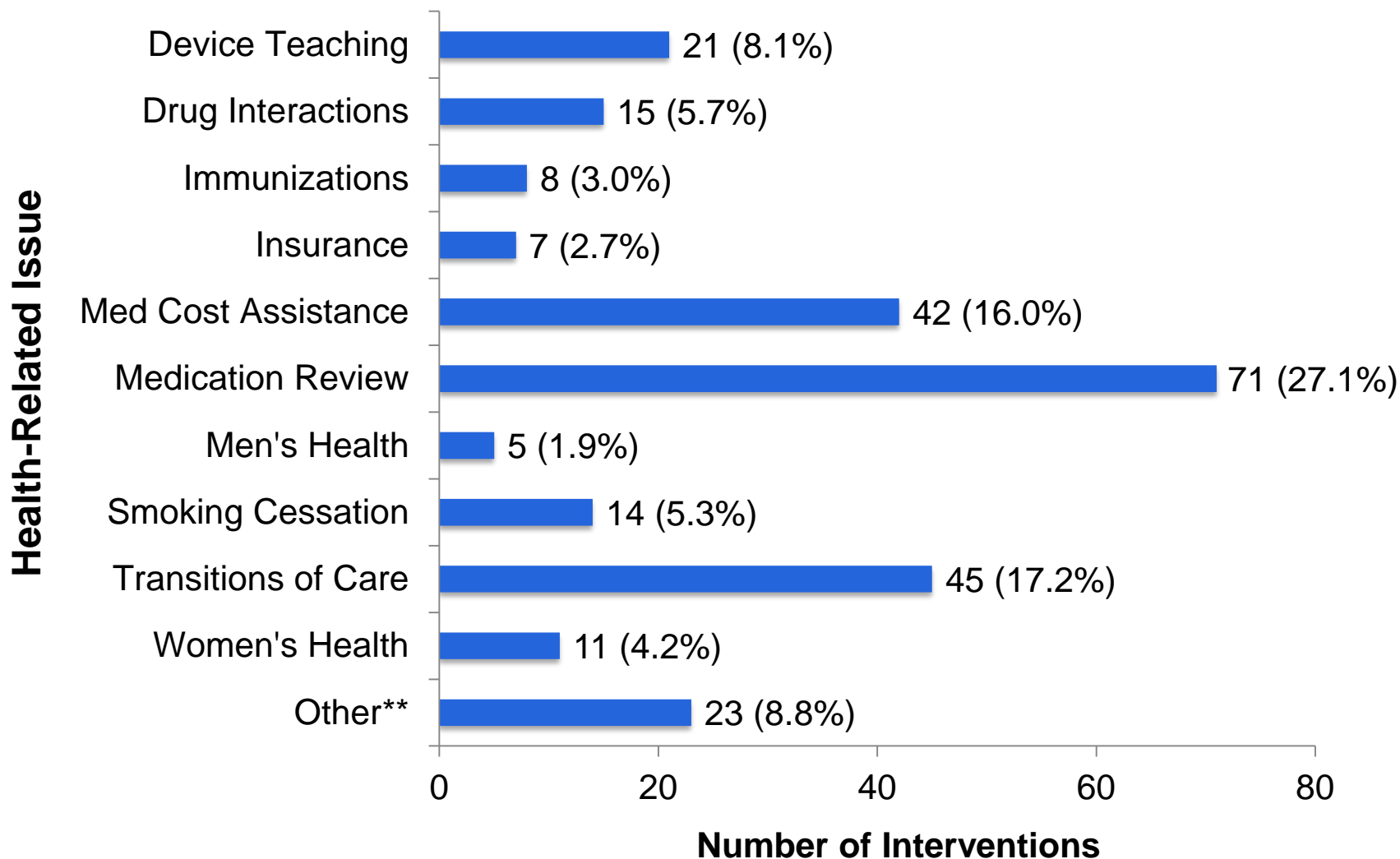


**Figure 2. Interventions by Disease State (N=616)**



\*Other included attention deficit hyperactive disorder, anemia, autism, celiac's disease, cognitive impairment, constipation, cough/cold, dermatology, genitourinary, gout, heart failure, insomnia, migraine, oncology, osteoporosis, obesity, pre-diabetes, renal/hepatic disease

**Figure 3. Interventions by Health-Related Issue (N=262)**



\*\*Other included medication adherence, chronic care management, gene-testing, home visits, monitoring, nutrition, urine toxicology screening

**Table 1: Baseline Characteristics (n = 543)**

Mean age (years) $\pm$ SD	58 $\pm$ 17
Male, n (%)	245 (45)
Race, n (%)	
Caucasian	358 (66)
African-American	139 (26)
Other <sup>a</sup>	46 (8)
Insurance, n (%)	
Medicare	256 (47)
Medicaid	123 (23)
Private insurance	137 (25)
Self-pay or unknown	26 (5)
Mean number of home medications $\pm$ SD	14 $\pm$ 7

<sup>a</sup>Other included Indian, Nepali, Ethiopian, Mediterranean, and unknown

**Table 2. Recommendations Made to Physician (N=918)**

<b>Recommendation, n (%)</b>	<b>Made</b>	<b>Accepted</b>	<b>Not Accepted</b>	<b>Unknown</b>
New drug	136	128 (94.1)	1 (0.7)	7 (5.2)
Alternate drug	110	96 (87.3)	5 (4.5)	9 (8.2)
Unnecessary drug	107	104 (97.2)	2 (1.9)	1 (0.9)
Dose increase	104	101 (97.1)	3 (2.9)	0
Dose decrease	55	51 (92.7)	3 (5.5)	1 (1.8)
No dose change	41	41 (100)	0	0
Drug interaction/adverse event	42	40 (95.2)	0	2 (4.8)
Monitoring parameters	151	134 (88.7)	3 (2.0)	14 (9.3)
Medication adherence	54	51 (94.4)	0	3 (5.6)
Other <sup>a</sup>	118	84 (71.2)	5 (4.2)	29 (24.6)
<b><i>Total</i></b>	<b>918</b>	<b>830 (90.4)</b>	<b>22 (2.4)</b>	<b>66 (7.2)</b>

<sup>a</sup>Other included device teaching, dosage form recommendations, EHR updates, medication cost assistance (prior authorization, insurance, drug manufacturer acquisition programs), medication refills, home monitoring, patient education, provider education, assisting with prescriber drug entry into EHR, drug information, referral to PCP/specialist or not otherwise specified.

**Table 3. Recommendations Made to Patient (N=412)**

<b>Recommendation, n (%)</b>	<b>Made</b>	<b>Accepted</b>	<b>Not Accepted</b>	<b>Unknown</b>
Immunizations <sup>a</sup>	27	23 (85.2)	4 (14.8)	0
Lifestyle modifications <sup>b</sup>	117	111 (94.8)	3 (2.6)	3 (2.6)
Medication adherence <sup>b</sup>	169	165 (97.6)	2 (1.2)	2 (1.2)
OTC recommendations <sup>b</sup>	25	25 (100.0)	0	0
Other <sup>c</sup>	74	69 (93.2)	3 (4.1)	2 (2.7)
<b><i>Total</i></b>	<b>412</b>	<b>393 (95.4)</b>	<b>12 (2.9)</b>	<b>7 (1.7)</b>

<sup>a</sup>Administered prior to patient departure from clinic

<sup>b</sup>Recommendation was documented as accepted if patient verbalized agreement; however, implementation of these recommendations were not tracked after patient departure from clinic

<sup>c</sup>Other included device teaching, drug recommendations (initiating new medications), education (adverse effects/hypoglycemia/nutrition), medication cost assistance (insurance discrepancies/deductibles), medication review (home health nurse), self-monitoring, referral (PCP/specialist/education course).

**Table 4. Billing Techniques Used For Patient Encounters (N=581)**

<b>Billing Codes</b>	<b>Encounters (%)</b>
No Charge	352 (60.6)
Billed by Provider (99213, 99214, 99215) <sup>a</sup>	129 (22.2)
Transitional Care Management (99495, 99496)	45 (7.8)
Incident to (99211)	32 (5.5)
Insurance-contracted comprehensive medication review (99605) <sup>b</sup>	19 (2.9)
Other <sup>c</sup>	4 (0.7)

<sup>a</sup> During interdisciplinary/combined visits

<sup>b</sup> Medication therapy management code

<sup>c</sup> Other included Chronic Care Management billing codes.